Sipura SPA-1001
Simplified Users Guide
Version 1.1a

A Step by Step Introduction

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Section 1 – Getting Started

When you receive your SPA-1001 it should contains the following items:

1. SPA-1001
2. Power supply
3. Phone cable
4. Network cable
5. Quickstart guide

Setting up the hardware:

Step 1: Connect the power cable to your SPA-1001
Step 2: Connect the network cable from your SPA-1001 to your DHCP enabled modem/router
Step 3: Connect an analogue phone to the "Phone" port in the SPA-1001.
Step 4: Turn the power on
Step 5: Pick up the phone and dial **** (You should hear a voice saying Sipura Configuration Menu)
Step 6: Dial 110# (Write down the IP address that is returned) (See **Appendix E** for all phone menu options)

At this stage, you can choose whether to upgrade the firmware. The latest version of the SPA-1001 firmware at the time of writing this document is

To upgrade the firmware see **Appendix C**.

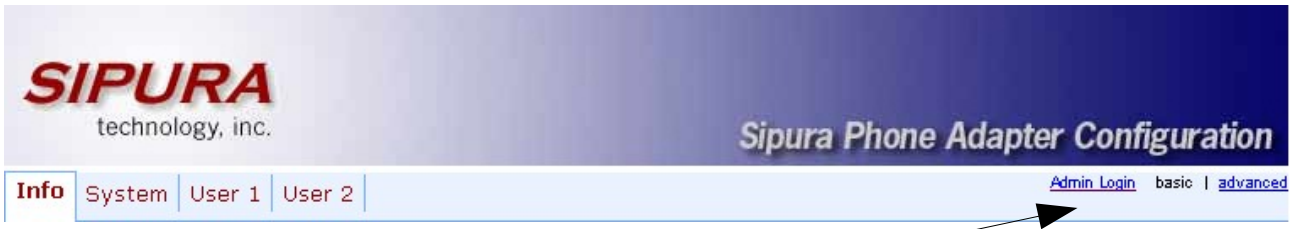
Section 2 – Configuring the SPA-1001 via the Web Interface

Once you have the IP address of your SPA-1001 you can access the web interface by opening a web browser and typing the following in the Address :

http://<*IP Address of SPA-1001*>

For example: http://192.168.1.10

You should now see the Sipura SPA-1001 Phone Adapter Configuration screen. Now you will need to log into the unit as Administrator and change the view to advanced. See images below.



Click on "Admin Login"

Click on "advanced"

Note: You can also go directly to the admin/advanced section by typing

http://192.168.1.10/admin/advanced

Section 3 – Regional Settings

Click on the "Regional" tab.

The following changes are optional, however they will make your SPA-3000 sound more Australian. Under the Call Progress Tones and Distinctive Ring Patterns headings change:

Dial tone:	400@-19,425@-19,450@-19;10(*/0/1+2+3)
Busy Tone:	425@-19;10(.375/.375/1)
Reorder Tone:	425@-19, 425@-29;60(.375/.375/1,.375/.375/2)
Ring Back Tone:	400@-19,425@-19,450@-19;*(.4/.2/1+2+3,.4/2/1+2+3)
MWI Dial Tone:	400@-19,425@-19,450@-19;2(.1/.1/1+2);10(*/0/1+2)

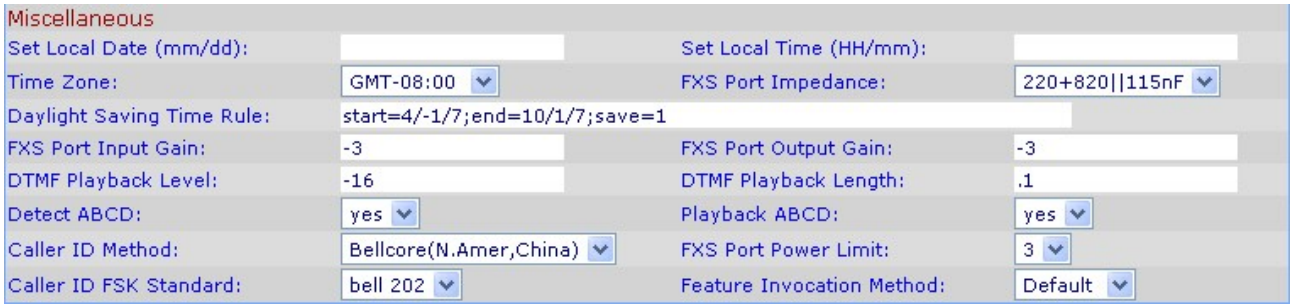
Call Progress Tones	
Dial Tone:	400@-19,425@-19,450@-19;10(*/0/1+2+3)
Second Dial Tone:	420@-19,520@-19;10(*/0/1+2)
Outside Dial Tone:	420@-16;10(*/0/1)
Prompt Tone:	520@-19,620@-19;10(*/0/1+2)
Busy Tone:	425@-19;10(.375/.375/1)
Reorder Tone:	425@-19, 425@-29;60(.375/.375/1,.375/.375/2)
Off Hook Warning Tone:	480@-10,620@0;10(.125/.125/1+2)
Ring Back Tone:	400@-19,425@-19,450@-19;*(.4/.2/1+2+3,.4/2/1+2+3)
Confirm Tone:	600@-16;1(.25/.25/1)
SIT1 Tone:	985@-16,1428@-16,1777@-16;20(.380/0/1,.380/0/2,.380/0/3,0/4/0)
SIT2 Tone:	914@-16,1371@-16,1777@-16;20(.274/0/1,.274/0/2,.380/0/3,0/4/0)
SIT3 Tone:	914@-16,1371@-16,1777@-16;20(.380/0/1,.380/0/2,.380/0/3,0/4/0)
SIT4 Tone:	985@-16,1371@-16,1777@-16;20(.380/0/1,.274/0/2,.380/0/3,0/4/0)
MWI Dial Tone:	400@-19,425@-19,450@-19;2(.1/.1/1+2);10(*/0/1+2)
Cfwd Dial Tone:	350@-19,440@-19;2(.2/.2/1+2);10(*/0/1+2)
Holding Tone:	600@-19;*(.1/.1/1,.1/.1/1,.1/9.5/1)
Conference Tone:	350@-19;20(.1/.1/1,.1/9.7/1)
Secure Call Indication Tone:	397@-19,507@-19;15(0/2/0,.2/.1/1,.1/2.1/2)

Ring1 Cadence: 60(.4/.2,.4/2)

Distinctive Ring Patterns			
Ring1 Cadence:	60(.4/.2,.4/2)	Ring2 Cadence:	60(.3/.2,1/.2,.3/4)
Ring3 Cadence:	60(.8/.4,.8/4)	Ring4 Cadence:	60(.4/.2,.3/.2,.8/4)
Ring5 Cadence:	60(.2/.2,.2/.2,.2/.2,1/4	Ring6 Cadence:	60(.2/.4,.2/.4,.2/4)
Ring7 Cadence:	60(.4/.2,.4/.2,.4/4)	Ring8 Cadence:	60(0.25/9.75)

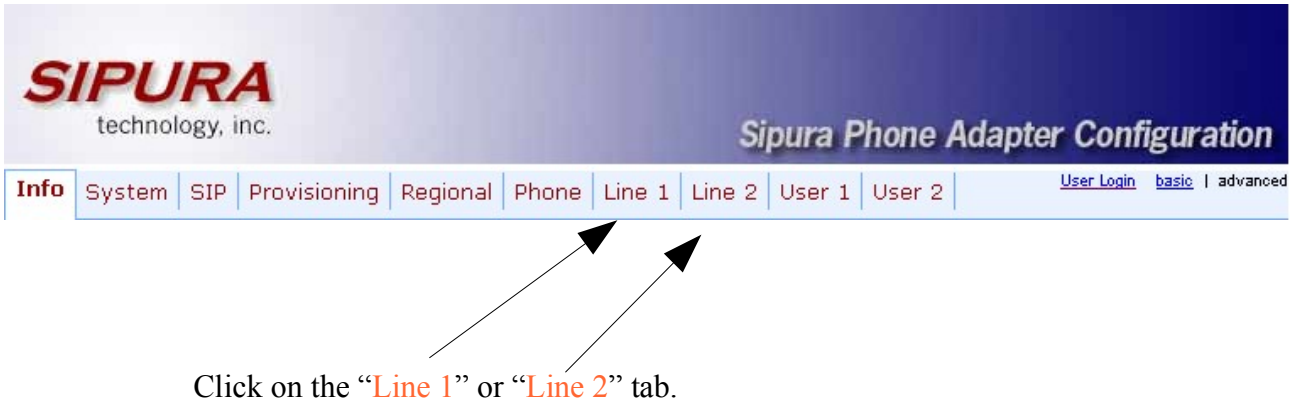
The following changes are required under the Miscellaneous heading :

FXS Port Impedance: 220+820||115nF



If you would like to configure the Time and Daylight savings, see **Appendix D**. This is completely optional.

Section 4 – Line 1 or Line 2 Settings



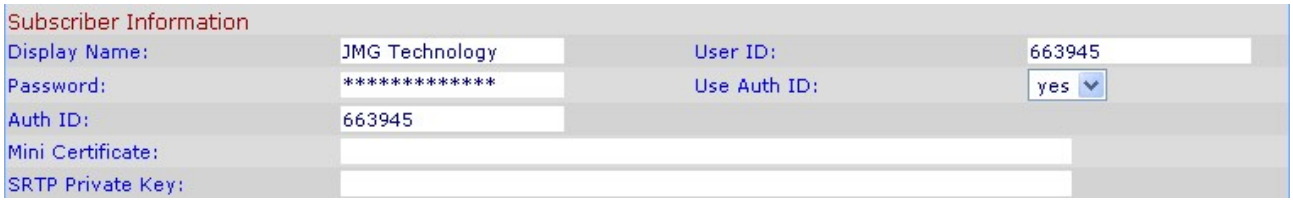
Click on the "Line 1" or "Line 2" tab.

The settings for Line 1 and Line 2 are identical, so for each provider you want to register follow the instructions below:

The first thing that needs to be changed is under the Proxy and Registration heading. Here you will need to enter the proxy and registration information given to you by your VoIP provider.

The following image shows the setup for MyTel.

The second thing that needs to be configured is under the Subscriber Information heading. Here you will need to enter your user id and password for given to you from your VoIP provider.



For **some** VoIP providers you will also have to enter the Auth ID and set Use Auth ID to yes, for others you will not.

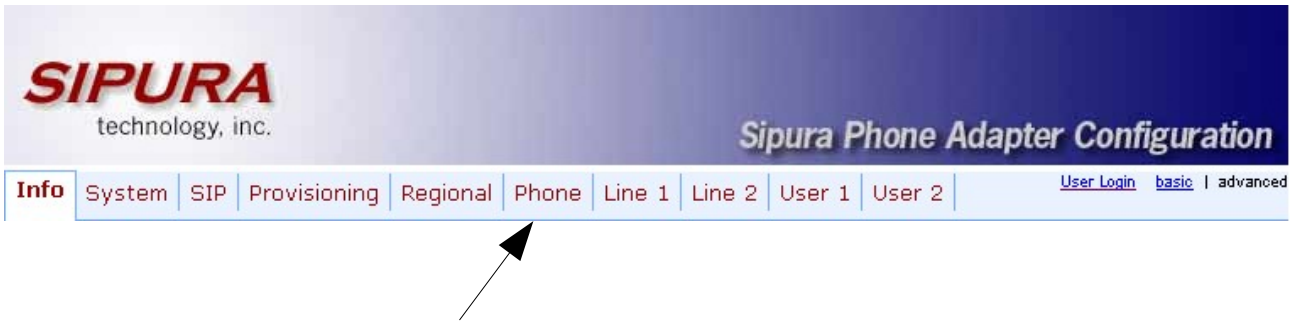
The next thing that needs to be altered is under the Audio Configuration heading. The following change is required.

Preferred Codec: G729a

The final item that requires changing is under the Dial Plan heading. The dial plan will vary from provider to provider. The dial plan show below is an example only, and may require alteration depending on which VoIP provider you subscribe to. See **Appendix A** for a detailed description of how dial plans work.

Dial Plan: (*xx|xx.)

Section 5 – Phone Settings



Click on the "Phone" tab.

Under the Line Section heading, you can set which line (or provider) you wish to use as your default outbound provider.

Default Line:	Line 1 or Line 2 (which ever you choose)
Alt Dial Tone Multiplier:	Used to convert the dial tone, so you know you have switched lines. A multiplier of 1.1 sounds ok.
Line 2 Select Code:	The character or characters used to switch to the 2nd line.

Everything should now be setup and ready to use. Make sure you press the Submit All Changes button to save the settings to the SPA-1001.

The Submit All Changes button will save the changes on all pages. You can however hit that button at the end of each section if you wish to do so.

Appendix A – Dial Plans

Dial plans can be very confusing at first glance. However they are invaluable feature of the SPA-1001 so you should at least learn the basics of how they work. The following dial plans are to show how to use the various features of dial plans. You should play around with them to suit your needs.

Dial Plan Syntax

( )	- The entire dial plan must be surrounded by an open and close bracket.
|	- Each individual dial plan must be separated by a pipe | character.
0-9	- Treated as normal digits
x	- Treated as any normal digit 0-9 on phone
*****	- Treated as normal * character on phone
#	- Treated as normal # character on phone
.	- Repetition
< : >	- Replacement, eg <02:612> means replace 02 with 612
S0	- Dial Immediately
!	- Barring a number, place this at the end of the number to bar it
,	- Provides a dial tone
[ ]	- Limiting choices, eg [24] means either 2 or 4, [2-5] means 2,3,4 and 5, [24-68] means 2,4,5,6,8

Example Dial Plans

Dial Plan 1: (<*1:0123456789>)

Description: This plan demonstrates replacement. If you dial a * followed by a 1 then the number 0123456789 would be dialed.

Dial Plan 2: (<0:61>[2-9]xxxxxxxxS0)

Description: This plan demonstrates replacement and limiting choices. When you dial an 0 followed by a 2,3,4,5,6,7,8 or 9 and then nine of any other digit (0-9) it will prepend 61 and remove the 0. So if you rang 02 123456789 the actual number that would be called would be 61 2 123456789.

Dial Plan 3: (1900xxxxxx!)

Description: This plan demonstrates number barring. If you enter a 1900 followed by 6 more digits (0-9) you call will not be placed.

Appendix B - Factory Reset

To perform a factory reset on your SPA-1001 dial **** on the phone. You should hear a Sipura message asking you to enter your selection. . Then dial 73738#.

WARNING: This will restore your unit back to factory defaults, all your information will be lost.

See **Appendix E** for all Phone Menu Options.

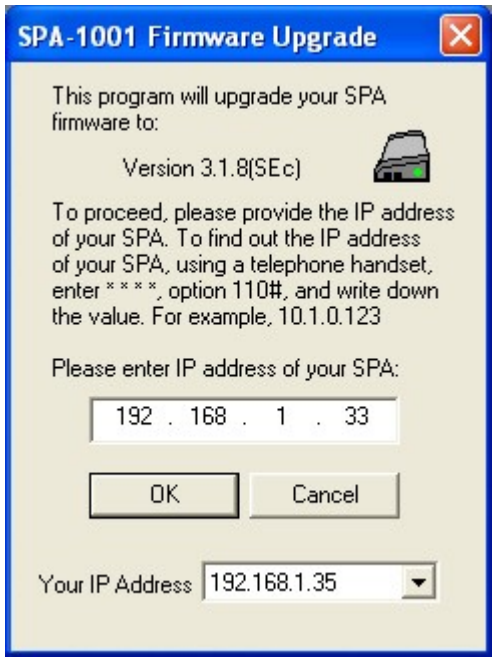
Appendix C – Upgrading Firmware

The latest firmware for the Sipura SPA-1001 can be located on the Sipura support site.

http://www.sipura.com/support/index.htm

To upgrade the firmware in your SPA-1001 download the latest firmware, unzip it and run the exe file provided. At the time of writing this document version 3.1.8(SEc) is the latest firmware,

The first thing that you need to do is enter the IP address of your SPA into the spaces provided. In the example below the SPA-1001 is located at 192.168.1.35.


SPA-1001 Firmware Upgrade
This program will upgrade your SPA firmware to:
Version 3.1.8(SEc)
To proceed, please provide the IP address of your SPA. To find out the IP address of your SPA, using a telephone handset, enter * * * *, option 110#, and write down the value. For example, 10.1.0.123
Please enter IP address of your SPA:
192 . 168 . 1 . 33
OK
Cancel
Your IP Address
192.168.1.35

Click on the OK button to begin so the program can find your SPA-1001. When the program locates the SPA, it will interrogate it and you will be shown a confirmation screen.

Click on the Upgrade button to begin the upgrade procedure. The upgrade itself should only take a minute or so. Whatever you do don't turn the power of during this operation.

Uploading Firmware to SPA@192.168.1.33 209408...
Please do not unplug the power of your SPA until the Status Light stops blinking
Cancel

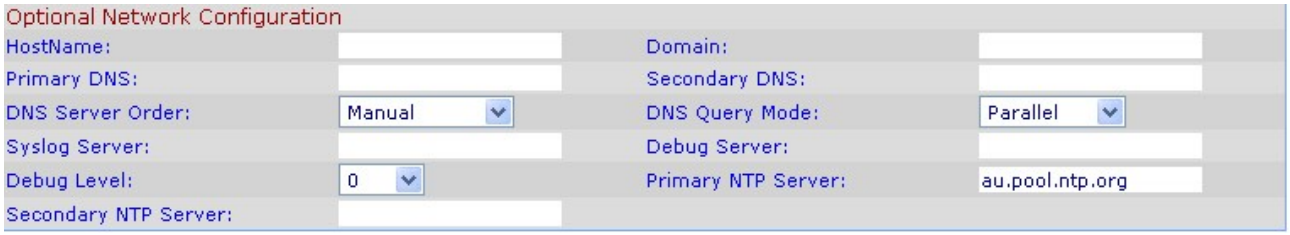
Once the procedure has finished, you should be presented with the following screen and your upgrade has been completed.

Note: The upgrade procedure does not effect your current settings.

Appendix D – Setting up a Time Server and Daylight Saving Rules

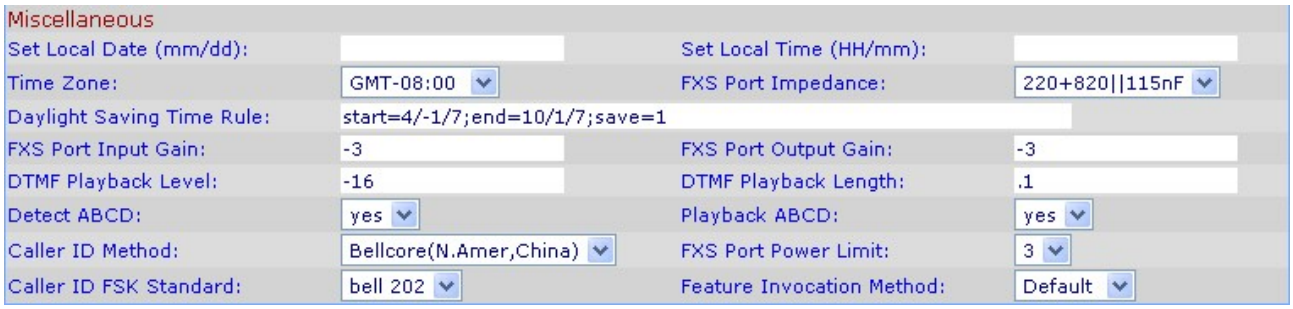
You can configure the SPA-3000 to automatically retrieve the current date and time. (Including daylight savings). To do this you will need to enter in a NTP server. Some providers will provide you with one.

Change to the "System" tab



Primary NTP Server: au.pool.ntp.org

Change to the "Regional" tab



For NSW these settings seem to work:

Time Zone: GMT+11:00
Daylight Saving Time Rule: start=3/-1/7/3;end=10/-1/7/2;save=-1

Appendix E – Sipura IVR (Phone Menu)

The Interactive Voice Response (IVR) capabilities of the SPA are designed to give the administrator and/or user basic read/write capabilities such that the unit can attain basic IP network connectivity and the more advanced browser-based configuration menu may be accessed.

IVR Action	IVR Menu Choice	Parameters	Notes
Enter Menu	****	None	You should hear a message saying "Sipura Configuration Menu. Please enter option followed by the pound key or hang up to exit"
Check DHCP	100	None	IVR will announce whether DHCP is enabled or disabled
Enable/Disable DHCP	101	1 = Enable 0 = Disable	Will require password if set
Check IP Address	110	None	IVR will announce the current IP address of the SPA
Set Static IP Address	111	Enter IP address using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	DHCP must be disabled; will will require password if set
Check Network Mask	120	None	IVR will announce the current Network Mask of the SPA
Set Network Mask	121	Enter value using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	DHCP must be disabled; will will require password if set
Check Static Gateway IP Address	130	None	IVR will announce the current gateway IP address of SPA.
Set Static Gateway IP Address	131	Enter value using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	DHCP must be disabled; will will require password if set
Check MAC Address	140	None	IVR will announce the MAC address of SPA in hex string format.

IVR Action	IVR Menu Choice	Parameters	Notes
Check Firmware Version	150	None	IVR will announce the version of the firmware running on the SPA.
Check Primary DNS Server Setting	160	None	IVR will announce the current setting in the Primary DNS field.
Set Primary DNS Server Setting	161	Enter IP address using numbers on the telephone key pad. Use the * (star) key when entering a decimal point.	Will require password if set.
Check Web Server Port	170	None	IVR will announce the port that the web server is listening on. (Default is 80)
Enable/Disable Web Server	7932	1 = Enable 0 = Disable	Will require password if set
Manual Reboot	732668	None	After you hear "Option Successful," hang-up. Unit will reboot automatically.
User Factory Reset **WARNING: ALL "User-Changeable" NON DEFAULT SETTINGS WILL BE LOST!** **This might include network and service provider data**	877778	Enter 1 to confirm * to cancel	SPA will prompt for confirmation. After confirming, you will hear "Option Successful." Hangup. Unit will reboot and all "User Changeable" configuration parameters will be reset to factory default values.
Factory Reset **WARNING:** **ALL NON-DEFAULT SETTINGS** **WILL BE LOST!** **This includes network and service provider data.**	73738	Enter 1 to confirm * to cancel	SPA will prompt for confirmation. After confirming, you will hear "Option Successful." Hangup. Unit will reboot and all configuration parameters will be reset to factory default values.

Appendix F – Sipbroker

Sipbroker is a free service that allows you to dial between certain VoIP providers. To use sipbroker you will need to add the following entry to your dial plan.

<,:>[x*][x*].<:@sipbroker.com>**

Please see http://www.sipbroker.com to read all about the great service provided my sipbroker.

To test that Sipbroker is working for you, you first dial ** and then try one of the numbers below.

*266-300 monkey sounds
*266-301 echo test
*266-303 Ireland speaking clock
*266-305 music

Sipbroker uses SIP-codes to communicate between the various providers that are supported. Some common codes are shown below.

Astratel	*269
Pennytel	*234
Sipme	*320

So to dial someone on Astratel, you would dial **, followed by *269, followed by the Astratel number you are trying to reach.

You can setup another dial plan to dial Astratel numbers by adding a new dial plan, something like.

<#1:*269>8888xxxx<:@sipbroker.com>

This means that when you dial #1 you can then dial an Astratel 8888 number and it will use sipbroker to negotiate the connection.

To view the complete list of SIP-codes please visit the following site location.
http://www.sipbroker.com/sipbroker/action/providerWhitePages